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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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of

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Complete if Known				
Application Number	10/588,679			
Filing Date	August 8, 2006			
First Named Inventor	Gavril W. Pasternak			
Art Unit	N/A			
Examiner Name	Not Yet Assigned			
Attorney Docket Number	62078NAT(51590)			

U.S. PATENT DOCUMENTS						
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
Initials*	No.1	Number-Kind Code <sup>2</sup> (if known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
	ĀĀ	US- 4,949,778	08/07/1990 LADNER et al.			
	AB	US- 6,103,492	08/15/2000	8/15/2000 YU		
	AC	US-6,500,927	12/31/2002   PASTERNAK et al.			
	AD	US-7,087,714	08/08/2006   PASTERNAK et al.			

	FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.1	Foreign Patent Document  Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> ( <i>ff known</i> )	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>	

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NON PATENT LITERATURE DOCUMENTS						
Examiner Initials	Cite No. Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				T <sup>2</sup>	
/RL/	CA	ROSSI et al. "Antisense mapping the MOR-1 opioid receptor: evidence for alternative splicing and a novel morphine-6 beta-glucuronide receptor." FEBS Lett. 369 (2-3): 192-196 (1995)				
90000	СВ	KAUFMAN et al. "Characterization of the Murine μ Opioid I Biological Chemistry 270(26): 15877-15883 (1995)	Receptor Gene	." The Hournal of		
	СС	ABBADIE et al. "Neurons in the dorsal column white matte neuropil in an unexpected location." Proc. Natl. Acad. Sci.				
0000	CD BARE et al. "Expression of two variants of the human μ opioid receptor mRNA in SK-N-SH cells and human brain." FEBS Letters 354: 213-26 (1994)					
000	CE	CHEN et al. "Molecular Cloning and Functional Expression Brain." Molecular Pharmacology 44: 8-12 (1993)	ı of a μ-Opioid l	Receptor from Rat		
	CF COLE et al. "The EBV-Hybridoma Technique and its Application to Human Lung Cancer."  Monoclonal Antibodies and Cancer Therapy 77-96 (1985)					
	CG	COTE et al. "Generation of human monoclonal antibodies Proc. Natl. Acad. Sci. USA 80; 2026-2030 (1983)	reactive with ce	ellular antigens."		
000	СН	DELFS et al. "Expression of Mu Opioid Receptor mRNA in Study at the Single Cell Level." The Journal of Comparativ	Rat Brain: An le e Neurology 34	In Situ Hybridization 5: 46-68 (1994)		
200000000000000000000000000000000000000	CI ELLIOTT et al. "The NMDA receptor antagonists, LY274614 and MK-801, and the nitric oxide synthase inhibitor, NG-nitro-L-arginine, attenuate analgesic tolerance to the mu-opioid morphine but not to kappa opioids." Pain 56; 69-75 (1994)					
200000000	CJ EVANS et al. "Establishment in culture of pluripotential cells from mouse embryos." Nature 28 (1981)					
	CK GIROS et al. "Chromosomal Localization of the Opioid Peptide and Receptor Genes in the Mouse." Life Sciences 56(18); 369-375 (1995)					
W	CL GUIRAMANDI et al. "Alternative Splicing of the Dopamine D2 Receptor Directs Specificity of					
	Examiner /Robert Landsman/ Date 07/21/2008 Considered					

Signature 223793

62078NAT(51590)

PTO/SB/08A/B (09-06)
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449/PTO Application Number 10/588,679 INFORMATION DISCLOSURE August 8, 2006 Filing Date STATEMENT BY APPLICANT Gavril W. Pasternak First Named Inventor Art Unit N/A (Use as many sheets as necessary) Not Yet Assigned Examiner Name

Attorney Docket Number

3

		Coupling to G-proteins." The Journal of Biological Chemistry 270(13); 7354-7358 (1995)
/RL/	СМ	HUSE et al. "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda." Science 246: 1275-1281 (1989)
000000000	CN	KOLESNIKOV et al. "1-Aminocyclopropane Carboxylic Acid (ACPC) Prevents Mu and Delta opioid Tolerance." Life Sciences 55(18): 1393-1398 (1994)
000000000	СО	KOLESNIKOV et al. "Blockade of tolerance to morphine but not to κ opioids by a nitric oxide synthase inhibitor." Proc. Natl. Acad. Sci. USA 90: 5162-5166 (1993)
000000000	СР	LIANG et al. "Cloning and characterization of the promoter region of the mouse μ opioid receptor gene." Brain Research 679: 82-88 (1995)
000000000	Q	LOWRY et al. "Protein Measurement with the Folin Phenol Reagent." J. Biol. Chem 193: 265-275 (1951)
00000000	CR	LUCAS et al. "New players in the 5-HT receptor field: genes and knockouts." TIPS 16: 246-252 (1995)
	cs	LUTZ et al. "Opioid Receptors and their Pharmacological Profiles." Journal of Receptor Research 12(3): 267-286 (1992)
	СТ	MIN et al. "Genomic structure and analysis of promoter sequence of a mouse $\mu$ opioid receptor gene." Proc. Acad. Sci. USA 91: 9081-9085 (1994)
0000000	2	MORRISON et al. "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains." Proc. Natl. Acad. Sci. USA 81: 6851-6855 (1984)
	CV	NEUBERGER et al. "Recombinant antibodies possessing novel effector functions." Nature 312(13): 604-608 (1984)
	CW	OLSON et al. "Endogenous Opiates: 1988." Peptides 10: 1253-1280 (1989)
000000000	СХ	PAN et al. "Cloning, Expression and Classification of a Kappa3-Related Opioid Receptor Using Antisense Oligodeoxynucleotides." Regul Pept. 54: 217-218 (1994)
0000000	CY	PAN et al. "Dissociation of affinity and efficacy in KOR-3 chimeras." FEBS Letters 395: 207-210 (1996)
000000000	CZ	PASTERNAK et al. "Pharmacological Mechanisms of Opioid Analgesics." Clinical Neuropharmacology 16(1):1-18 (1993)
***************************************	CA1	PASTERNAK et al. "Mapping of opioid receptors using antisense oligodeoxynucleotides: correlating their molecular biology and pharmacology." TIPS 16: 344-350 (1995)
8	CB1	REISINE et al. "Molecular biology of opioid receptors." Trends Neurosci. 16: 506-510 (1996)
00000000	CC1	REISINE et al. "Opioid Analgesics and Antagonists." In Goodman & Gilman's The Pharmacology Basis of Therapeutics 9 <sup>th</sup> Ed. McGraw-Hill: 521-555 (1996)
00000000	CD1	ROBERTSON "Using Embryonic Stem Cells to Introduce Mutations into the Mouse Germ line." Biology of Reproduction 44: 238-245 (1991)
000000000000000000000000000000000000000	CE1	ROSSI et al. "Antisense mapping of MOR-1 in Rats: Distinguishing between Morphine and Morphine-6β-glucuronide Antinociception <sup>1</sup> ." The Journal of Pharmacology and Experimental Therapeutics 28(1): 109-114 (1997)
000000000	CF1	ROSSI et al. "Naloxone sensitive orphanin FQ-induced analgesia in mice." European Journal of Pharmacology 311: R7-R8 (1996)
000000000	CG1	ROSSI et al. Antisense mapping the MOR-1 opioid receptor: evidence for alternative splicing and a novel morphine 6β-glucuronide receptor." FEBS Letters 369: 192-196 (1995)
000000000	CH1	SIBINGA et al. "Opioid Peptides and Opioid Receptors in Cells of the Immune System." Ann Rev. Immunol. 6: 219-249 (1988)
000000	CI1	SIMON et al. "Opioid Receptors and Endogenous Opioid Peptides." Medicinal Research Reviews 11(4) 357-374 (1991)
<u>8 8 4</u> 0 1	CJ1	STANDIFER et al. "G Proteins and Opioid Receptor-Mediated Signalling." Cell Signal 9: 237-

2

of

Sheet

Approved for use through 03/31/2007. OMB 0651-0031 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Peperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains e valid OMB control number. Complete if Known Substitute for form 1449/PTO Application Number 10/588,679 INFORMATION DISCLOSURE August 8, 2006 Filing Date STATEMENT BY APPLICANT Gavril W. Pasternak First Named Inventor Art Unit N/A (Use as many sheets as necessary) Not Yet Assigned Examiner Name 62078NAT(51590) 3 of 3 Sheet Attomey Docket Number

			_
/RL/	CK1	STANDIFER et al. "Differential Blockade of Opioid Analgesia by Antisense Oligodeoxynucleotides Directed against Carious G Protein α Subunits." Molecular Pharmacology 50: 293-298 (1996)	
2000000000	CL1	TAKEDA et al. "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences." Nature 314: 452-454 (1985)	
000000000000000000000000000000000000000	CM1	TRUJILLO et al. "Inhibition of Morphine Tolerance and Dependence by the NMDA Receptor Antagonist MK-801." Science 251: 85-87 (1991)	
9999999999	CN1	VAN DEN ENGH et al. "Estimating Genomic Distance from DNA Sequence Location in Cell Nuclei by a Random Walk Model." Science 257: 1410-1412 (1992)	
000000000	CO1	VANETTI et al. "Cloning and Expression of a novel mouse somatostatin receptor (SSTR2B)." FEBS Letters 311(3): 290-294 (1992)	
000000000	CP1	WANG et al. "μ opiate receptor: cDNA cloning expression." Neurobiology 90: 10230-10234 (1993)	
	CQ1	WOLOZIN et al. "Classification of multiple morphine and enkephalin binding sites in the central nervous system." Proc. Natl. Acad. Sci. USA 78: 6181-6185 (1981)	
	CR1	YASUDA et al. "Cloning and functional comparison of κ and δ opioid receptors from mouse brain." Proc. Natl. Acad. Sci USA 90: 6736-6740 (1993)	
***************************************	CS1	ZIMPRICH et al. "Cloning and expression of an isoform of the rat $\mu$ opioid receptor (rMOR1B) which differs in agonist induced desensitization from rMOR1." FEBS Letters 359: 142-146 (1995)	
	CT1	DU et al. "Identification of a novel splice variant of the mouse mu opioid receptor." Society for Neuroscience 695.5 (1996)	
	CU1	DU et al. "A splice variant of the mu opioid receptor is present in human SHSY-5Y cells."  Society for Neuroscience 479.3 (1997)	
000000000000000000000000000000000000000	CV1	LEVENTHAL et al. "Antisense Mapping of the MOR-1 Opioid Receptor Clone: Modulation of Hyperphagia Induced by DAMGO'." The Journal of Pharmacology and Experimental Therapeutics." 282(3): 1402-1407 (1997)	
V	CW1	LEVENTHAL et al. "Antisense oligodeoxynucleotides against the MOR-1 clone alter weight and ingestive responses in rats." Brain Research 719: 78-84 (1996)	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Examiner	/Robert Landsman/	Date	07/21/2009
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